

CLAIMS

What is claimed and desired to be covered by Letters Patent is as follows:

1. A system for injecting material, including air-entrained powdered substances, into a wall or walls of a static structure comprising:
 - a) a plurality of identical fluid-injecting plugs adapted to be mounted on at least one wall of a static structure, each fluid-injecting plug including
 - (1) a hollow body having
 - (A) a first end,
 - (B) a second end,
 - (C) a longitudinal axis extending between the first end of the body and the second end of the body,
 - (D) a unitary and continuous tubular wall connecting the first end of the body to the second end of the body, the wall having an inner surface and an outer surface, the outer surface having an outer dimension measured transverse to the longitudinal axis,

- (E) the outer dimension of the wall decreasing from a first size adjacent to the first end of the body to a second size adjacent to the second end of the body so the wall tapers from the first end of the body to the second end of the body,
- (F) a blind-ended bore defined inside the hollow body, the blind-ended bore extending from adjacent to the first end of the body to adjacent to the second end of the body and being closed adjacent to the second end of the body,
- (G) a plurality of fluid passage ports defined through the wall from the outer surface of the wall to the inner surface of the wall adjacent to the second end of the body, the fluid passage ports fluidically connecting the blind-ended bore to the outer surface of the wall adjacent to the second end of the body, and
- (H) a threadlike anchor rib located on the outside surface of the wall and

extending around the body and extending from adjacent to the first end of the body to adjacent to the second end of the body, the threadlike anchor rib being adapted to engage the wall and securely mount the body on the wall when the injection plug is in place on the wall,

(2) a head that is located on the first end of the body and is unitary and one-piece with the wall of the body, the head having

(A) a first surface located adjacent to the first end of the hollow body, the first surface of the head being one-piece with the body,

(B) a second surface,

(C) a thickness dimension that extends between the first surface of the head and the second surface of the head in the direction of the longitudinal axis of the body,

(D) an outer perimeter, the outer perimeter of the head being larger than the outer dimension of the wall adjacent to the

- first end of the body,
- (E) a seating flange area on the first surface of the head between the outer surface of the wall of the body adjacent to the first end of the hollow body and the outer perimeter of the head,
 - (F) a through-bore defined through the head from the first surface of the head to the second surface of the head, the through-bore having a central axis that is aligned with the longitudinal axis of the hollow body, the through-bore fluidically connecting the blind-ended bore to the area adjacent to the through-bore and adjacent to the second surface of the head, and
 - (G) a screw thread on the head adjacent to the through-bore,
- (3) a through-bore plug that is mounted in the through-bore when the through-bore plug is in place, the through-bore plug including
- (A) a first end that is located adjacent to the outer surface of the head when the through-bore plug is in place,

- (B) a second end that is located inside the through-bore when the through-bore plug is in place,
- (C) a wall connecting the first end of the through-bore plug to the second end of the through-bore plug,
- (D) a through-bore plug screw thread on the wall of the through-bore plug, the through-bore plug screw being sized to threadably engage the screw thread on the head when the through-bore plug is in place to threadably and removably secure the through-bore plug in place on the head,
- (E) a tool-engaging opening in the through-bore plug, the tool-engaging opening extending from the first end of the through-bore plug toward the second end of the through-bore plug and having an open end that is located adjacent to the outer surface of the head when the through-bore plug is in place and a closed end that is located inside the through-bore to close the through-bore

when the through-bore plug is in place
on the head; and

b) each of said fluid-injection plugs being spaced
apart from adjacent fluid-injection plugs and
spaced apart from a surface supporting the wall
when the fluid-injection plugs are in place on the
wall.

2. The system as described in claim 1 wherein the through-bore in the head is circular.
3. The system as described in claim 1 wherein the through-bore in the head is polygonal.
4. The system as described in claim 1 wherein the through-bore plug includes a cylindrical body and the first end is planar.
5. The system as described in claim 1 wherein the through-bore plug includes a hemispherical body and the first end is arcuate.

6. A system for injecting material, including air-entrained powdered substances, into a wall or walls of a static structure comprising:
- a) a plurality of identical fluid-injecting plugs adapted to be mounted on a wall of a static structure, each fluid-injecting plug including
 - (1) a unitary hollow body having a first end and a second end, a blind-ended bore extending from adjacent to the first end to adjacent to the second end,
 - (2) a fluid passage port located near the second end, the fluid passage port being fluidically connected to the blind-ended bore,
 - (3) a bore closing plug which is releasably mounted on the body when the plug is in use, the plug closing the blind-ended bore when the plug is in use, and
 - (4) a screw thread on the body, the screw thread being adapted to securely engage the wall to mount the body on the wall when the fluid injecting plug is in use; and
 - b) each of said fluid-injection plugs being spaced apart from adjacent fluid-injection plugs and spaced apart from a surface supporting the wall when the fluid-injection plugs are in place on the wall.